

How do gender differences impact fraud cases?

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Abstract:

This study explores the impact of gender differences on fraud cases in China, addressing the scarcity of research on this topic. Through a combination of secondary literature review and case analysis, the research examines 20 recent fraud cases (10 involving female fraudsters and 10 involving male fraudsters) to analyze the relationship between gender and fraud methods, victim gender, and fraud amounts. Statistical methods, including Chi-square tests and ANOVA, were employed to evaluate potential gender-based differences. The results indicate no significant gender differences in fraud methods, victim gender, or fraud amounts, suggesting that gender roles may have diminishing influence in modern fraud cases. Despite limitations such as a small sample size and narrow fraud method classifications, this study provides a foundational reference for future research on gender and fraud behavior, recommending expanded sample sizes and additional variables for deeper analysis.

Keywords: Gender differences, fraud cases, fraud methods, victim gender, fraud amount, statistical analysis

1. Introduction

As modern Chinese society continues to develop, the mindset of the residents has also seen significant progress. In addition, there has been an extensive adoption of internet technology across the country. As a result, it appeared with some cyber fraud cases. Since 2011, there have been 100,000 cases of telecom fraud nationwide, resulting in losses of more than 4 billion yuan. In 2012, there were 170,000 cases of telecom fraud nationwide, resulting in losses of more than 8 billion yuan, up 70 percent and 100 percent over the previous year respectively. In 2013, there were 300,000 telecom fraud cases nationwide, resulting in losses of more than 10 billion yuan, an

increase of 77 percent and 25 percent, respectively, over the previous year (Ren Peng-Fei, 2014). Research from China Court website shows that, from 2017 to 2021, courts from all levels in China had concluded 282,000 cyber fraud cases, the number of the cases rises. The cases involved 282 accusations, but the crime of fraud had the highest percentage of 36.53%. This builds our understanding that the crime of fraud has a serious harm to our society and the government were looking for solutions fraud crime. From the news, it was said that In 2023, the national security agencies continued to fight against telecom network fraud. They solved 437,000 cases and arrested many suspects.

After reading the secondary literature that had been written before by others, firstly it was found that the existing literature was mainly talking about theoretical framework combined with some data analysis, but didn't specifically write about the reasons behind and the factors that impact. In addition, there isn't a deep study on the characteristics of the offender and victim. The literature on gender differences in the crime of fraud isn't too much. Even though some research talks about the personality characteristics of female fraud offenders, it doesn't overall talk about gender differences, and could not be suitable for Chinese society. To better understand the motivation and decisions made by different genders of the offenders of fraud, also to lower the percentage of the crime of fraud cases, this research will focus on criminal fraud cases in China, use the method of collecting and analyzing data, to study the gender differences in the crime of fraud cases.

2. Literature review

2.1 Definition of fraud

The definition of fraud in Law refers to the action of defrauding public and private property with a large amount of money by fabricating facts or concealing the truth for the purpose of illegal possession. Fraud is illegal, but frauding of a large amount of property is crime (ZHAO Bing-zhi, 2009). Another perspective is that the crime of fraud should be defined as the act of the perpetrator intentionally fabricating important matters that are difficult for the victim to obtain the truth, controlling the victim's disposal of property, and causing property damage to the victim. This definition can be further divided into three parts: formal objectivity, formal subjectivity, and substantive requirements (Oyang Jing Feng, 2023). With the change of time, the definition of fraud crime has become more and more detailed, in order to better protect personal interests in the law. Not just about China, but also in other countries, definition of fraud is similar.

As an example on 27 December 2007, the plenary session of the Supreme Court of the Russian Federation issued a resolution No. 51, which "for the purpose of obtaining economic benefits, by deception or abuse of trust, the victim on the basis of false knowledge of the transfer of funds in a bank account to others without compensation is recognized as a crime of fraud"(Qiao Zhen-Hang, 2023).

It is generally believed that the basic structure of the crime is that the perpetrator commits fraud for illegal possession → the deceived person has a wrong understanding → the deceived person disposes of the property based on the wrong understanding → the deceived person's property suffers losses. From the chain and process of fraud, it can

be seen that the transfer of property between the scammer and the deceived, and the fraud can succeed. It is a process of psychological interaction between the two sides under the dominance of the scammer. The psychology of the scammer is simple and clear, that is, the illegal possession of the victim's property, driven by this purpose. It is necessary to study under what circumstances to make the victim voluntarily surrender the property. Fictional facts, concealing the truth are for the psychological activities of the service, it can be seen that the entire process of fraud and psychological activities are closely related (Lu Qi-Jun, 2017). The writer also mentions that to avoid more fraud crimes happening, no matter how the form of fraud is new, there is always a common thing running through it, the police and the government should truly understand and clear the mechanism of fraud, and find the common character of fraud.

2.2 Characteristics of fraudsters

In the previous research of Personality Characteristics of Female Fraud Criminals by Li YuHan (2020), the author did a survey with 151 female fraudsters in the women's prison area of a city detention center by distributed questionnaires. According to the survey statistics, most of the female fraudsters were aged between 19 and 39, with an average age of 34. Among them, the education level is junior high school and the age is generally low. Their marital status is mostly unmarried, and some relatively many people have had marriage changes, which is also relatively consistent with the general low age. Last, the author summarized some of the factors that influence female fraud criminals' motivation, from the perspective of personality types, their ages, and how they were educated: As a result, it was found that the basic personality characteristics of female fraudsters are low mental quality, high neuroticism, high extroversion and high concealment, which is closer to the type of bile. External tendency, impulsivity, camouflage, and strong dependence. Also for female fraudsters of different ages, the low age group has low stability and high tension, emotional instability, easy to impulse tension; High age concealment is higher, cautious, worldly, good at camouflage. On how they were educated, the writer mentioned that highly educated female fraudsters should belong to the extroverted thinking personality proposed by Jung Carl Gustav, this kind of people respect objective laws and do not take things emotionally. When doing crime, such criminals are organized, followed the plan, step by step, deal with the deceived in a false way, or retreat to advance, and use the curiosity of the deceived to lead them into a scam. Even though this dissertation didn't mention anything about gender, it still

provided information that could help to better understand the fraudsters. This is one of the most valuable literature for writing this dissertation. This literature was written 4 years ago which means that it is new. Also, its topic mentioned both gender and fraudsters' characteristics which is close to the research topic of this dissertation. Even though the dissertation and the literature are both talking about fraud cases and gender, the secondary literature only focuses on female fraudsters while this dissertation will look at both genders of the victim and the fraudster. What's more, in the literature the author surveyed 151 female fraudsters in the women's prison and it is difficult for every researcher to do this kind of survey in prison because of the country's secrecy regulations. These reasons make this literature valuable as a reference to use when writing this dissertation.

Theory of psychology, self-deception, and deceitful behavior of fraud crime by BAI Shu-Liang (2020), introduced the mentality of fraud crime by conducting a basic information survey of 63 fraudsters, it was found that the age distribution of fraudsters is between 26 and 55 years old. The fraudsters in the investigation had a high level of education. The dissertation wrote about how fraud crime uses the theory of cognitive psychology and self-deception to swindle. The theory is more about interacting with people. Self-deception is about over-packaging their image, including language, appearance, and behaviors, and gaining the trust of victims through this disguise. That's because impression management is considered to be a powerful tool to win the trust of others. This study found that fraudsters were able to understand People's mental state and predict the behaviors of others. So by reform through education, the fraudsters could show themselves in some fields. At last, the writer talks about the limitation of her research, interpersonal cheating experiments still lack the data of healthy people as the control group, and couldn't completely exclude the interference of the special population of fraudsters and general property criminals as criminals. Also, there are limitations to the use of the scale as a tool to measure the level of self-deception of subjects. In the Summary of research on the prevention and treatment of fraud crime in China in recent ten years by Guo Ze-Feng (2017), the writer takes "Fraud cases" as the main topic, the number of literature on fraud crime in China has been increasing since 2010. In 2017, the highest number in a decade was 380, while the lowest was 131 in 2010. The national policy of keeping crime data confidential makes it difficult for researchers to collect such data through regular surveys. By analyzing 23 secondary literature in the past ten years, the writer mentioned that the purpose of a swindler's crime is to pursue an economic interest, their inner mentality is greed, and the crim-

inal process of swindlers is changeable. Also, the basic personality of the swindler is embodied in extroversion, impulsiveness, camouflage, and strong dependence. They have strong self-control, are better liars than ordinary people, and are more likely to make risky decisions when in trouble. Fraudsters have a strong ability to read minds, but there are defects in their theory of emotional psychology, and it is difficult to form empathy for others' emotions. However, the swindlers also have strong adaptability and adaptability, and they have a higher impression management tendency. About how to avoid more fraud cases happening the writer said that the country should study fraud crimes from all around the world. And use different ways to study and make our research better. Also, the government needs to find out what makes people commit fraud crimes, and then figure out how to stop each one.

2.3 Gender differences

In the International of mobility in Chinese Society from the perspective of gender differences: trends and influences, by GAO Yan (2022), starting from the relationship among intergenerational income, intergenerational occupation, and intergenerational education, this paper adds intergenerational occupation and intergenerational education into the study of intergenerational income influence mechanism. It is found that intergenerational occupation and intergenerational education do have significant gender heterogeneity in offspring income. The writer summarized that gender differences in Chinese society can be shown in the education system and employment environment. Another research using CSS2019 survey data compared gender differences in educational, economic, and occupational status acquisition between men and women with the 2001 survey data of the "Study on Changes in Contemporary Chinese Social Structure" of the Chinese Academy of Social Sciences. It is found that men and women have different influence mechanisms in different socioeconomic status acquisition, and the gender difference in socioeconomic status acquisition is also changing. The findings also show that social system, family background, and education level influence both women and men in obtaining social and economic status (Li Chun-Lin Guo Ya-Pin, 2022). This builds our understanding that gender differences affect many areas of our lives, which could also impact fraud cases.

2.4 Summary and Limitation

Most secondary literature looks for the characteristics of fraudsters by using research methods such as sending surveys to the fraudsters in prison or collecting information in some real-life cases. The literature above mentioned

educational background, ages, way of crime, and whether they got a team. However, the limitation is that the country's secrecy regulation makes it difficult to survey the fraudsters. On the other hand, the literature only focuses on some background that affects the fraudsters to crime, and there could still be many factors that affect them. While this dissertation will focus on one of the factors that haven't been mentioned in the above literature, how do gender differences affect fraud cases. This dissertation would be collecting about 10-20 fraud cases in China and analyzing in a table that will clearly show the differences in each gender of the fraudster. It would also focus on the motivations and as a value of the dissertation, it would be talking about ways to avoid more fraud cases happening.

3. Methodology

3.1 Research aim and question

The study aimed to identify if gender could affect fraud cases, given the importance of avoiding more fraud cases, combined with the scarcity of related secondary literature. Consequently, the research question was defined as:

"How do gender differences affect fraud cases "

The research question guided the literature review. And this dissertation will do cases study to understand how gender differences would affect in fraud cases.

3.2 Secondary Research

The literature selection in this dissertation involved a search on cnki.com, a platform known for having a large number of literature from China and other countries. By using keywords such as fraud, gender differences, and characteristics, the dissertation selects secondary literature based on the year of writing, how it relates to gender, and whether the research is reliable. Articles that only discuss solutions to prevent more fraud cases are not appropriate for the main discussion of this article. At the same time,

documents from 10 years ago or earlier are not suitable for use in this paper. Previous research shows that there are very few studies on the relationship between gender and fraud cases. Therefore, this dissertation decides to conduct a case study and collect key information. This study randomly investigated 20 fraud cases in China in 2024, including 10 cases of female fraudsters and 10 cases of male fraudsters, and coded the contents of the cases to extract the gender of the fraudster, the amount cheated, the gender of the victim, and the method of fraud. When choosing which case is appropriate as an example, this study is primarily about gender. Thus, the criterion for selection was cases where the gender of the fraudster was mentioned. In addition, the selected cases took place in 2024, which is very close to today, so it is good to know the latest methods of fraud. After collecting 20 cases on the Internet and in the news, the analysis of variance and Chi-square test are carried out on these 20 cases using SPSSAU which is a website that help analyzing, and the conclusion will be drawn by summarizing the research results.

3.3 Ethical Consideration



The cases mentioned in this paper are all from public news, websites, disclosures, etc., and there is no violation of personal privacy.

4. Result and analysis

4.1 Charts and analysis

By collecting 20 cases which contains 10 female fraudsters and 10 male fraudsters on the news and website, the dissertation put the results into a clear table showing each of the aspects. The information in the cases was split into 4 aspects: the gender of the fraudster, the gender of the victim, the method of fraud, and the amount of money. The analysis is done by using the SPSSAU website. The table of the cases can be found in the appendices.

Table 1 The relationship between the fraud method and the gender of the scammer

Chi-Square Analysis  N (%) 						
Items	Categories	Method of Fraud(%)				Total
		Fake marriage and fake love	Impersonation of a public officer	Investment scam	sell fake goods	
Gender of the fraudster	Female	6(60.00)	1(50.00)	1(50.00)	2(33.33)	10(50.00)
	Male	4(40.00)	1(50.00)	1(50.00)	4(66.67)	10(50.00)
Total		10	2	2	6	20

* $p < 0.05$ ** $p < 0.01$

According to the first chart, fake marriages and fake love are the most common methods of fraud, accounting for about 50% (6 out of 10 cases by women and 4 by men). In addition, impersonation of public officials and investment fraud accounted for 10 percent each (2 cases, of which 1

was female and 1 was male). 30 percent of the cases involved fake selling of goods (2 out of 6 cases by women and 4 by men). From the perspective of gender distribution, female fraudsters dominate in fake marriage and fake love cases, while male fraudsters are more prominent in

fake selling goods cases. Chi-square analysis showed that there was no significant relationship between gender and

fraud method ($\chi^2 = 1.067$, $p = 0.785$).

Table 2 Chi-square analysis of the gender relationship between scammers and victims

Chi-Square Analysis N (%)							
Items	Categories	Gender of the victim(%)			Total	χ^2	p
		Female	Male	female			
Gender of the fraudster	Female	2(40.00)	5(50.00)	1(100.00)	8(50.00)	1.200	0.549
	Male	3(60.00)	5(50.00)	0(0.00)	8(50.00)		
Total		5	10	1	16		

* $p < 0.05$ ** $p < 0.01$

In the second chart, the data shows the fraudster's gender's relationship to the victim's gender. Among the 16 cases, there were 8 cases of male and female fraudsters respectively, female fraudsters and male fraudsters defraud-

ed both men and women 50% (5 cases each). Overall, Chi-square analysis showed no significant relationship between the gender of the fraudster and the gender of the victim ($\chi^2 = 1.200$, $p = 0.549$).

Table 3 ANOVA analysis of fraudster gender and fraud amount of money

ANOVA				
	Gender of the fraudster (Mean±Std. Deviation)		F	p
	Female (n=10)	Male (n=10)		
Amount of money	795065.20±1529602.18	92323979.80±283848309.06	1.040	0.321

* $p < 0.05$ ** $p < 0.01$

In the third chart, the relationship between the gender of the fraudster and the amount of money is analyzed. The average amount of fraud committed by female fraudsters was \$795,065.20 (standard deviation 1,529,602.18), while the average amount committed by male fraudsters was \$9,233,297.80 (standard deviation 28,384,830.96). Analysis of variance (ANOVA) showed that gender had no significant effect on the amount of fraud ($F = 1.040$, $p = 0.321$).

4.2 Summary and result

Through the above analysis of the three charts, the gender of fraudsters did not show a significant relationship in the differences in the methods of fraud, the gender of the victim, and the amounts of money that had been fraud. Although female fraudsters dominated in fake love and fake marriage cases, while men more participated in selling fake goods cases, these differences are not enough to show that gender has a significant impact on fraud patterns. Similarly, there was no significant difference between the gender of the fraudster, the gender of the victim, and the amount of fraud money.

5. Discussion

5.1 Discussion of the result

Small sample size: The small number of cases involved in this study, just 20, may not be enough to show a statistically significant difference, especially in the distribution

of various fraud method categories, fraud amounts, and gender groups of fraudsters. With a larger sample size, it will be easier to detect potentially significant effects.

Diversity of fraud methods: Although fraud methods can be divided into several categories (fake marriage, fake love, fake selling goods, etc.), the actual mode of operation and background may be very complex and not simply affected by gender. For example, both men and women may be able to adapt to different types of scams, and there have been cases of fraudsters hiding their true gender from their victims, which makes the use of these techniques similar across genders.

The amount of fraud is highly volatile: the difference in the amount of fraud is affected by several factors, such as the financial status of the victim, the difference in the target group of the fraud, and the complexity of the fraud method. Therefore, looking solely at the effect of gender on the amount of fraud may mask these complex variables, leading to a failure to detect significant gender differences.

Factors that might affect the amount of fraud money: The amount of fraud is not only affected by the gender of the scammer but also depends on the characteristics of the victims themselves. First, the victim's financial situation is a key factor, and victims with deep pockets are more likely to be targeted for fraud, especially in investment scams or large-scale financial scams that result in larger amounts. What's more, education also plays an important role, as victims with less education lack an understanding of complex financial products and are more likely to

be involved in high-dollar scams. This means that in this study the relationship between gender differences and the amount of fraud money didn't show a significant difference might be because of the other factors that influence the amount of fraud money.

5.2 Compare with the previous research

Similarities and differences in the research method: Most of the previous studies used a combination of secondary literature and theoretical frameworks to analyze the personality traits and motivations of scammers or directly contacted scammers in the form of interviews and questionnaires. However based on the secrecy regulation, it is difficult to directly contact the scammers, so this research chose another type of research method which is collecting cases that recently happened. At the same time, the dissertation also contains a study on the secondary literature which is similar to the previous research.

Similarities and differences on the research topic: The difference is that the previous study of gender differences and fraud cases focuses on the victim while this dissertation focuses on the fraudster. Previous research takes ZG City as an example, from the individual scale, the inclusion of individual genera is constructed a multi-level Logit model of sexuality and community attributes, for women and men factors influencing the relative probability of being victimized by contactless fraud conduct analysis (Zhang Chunxia, Liu Lin, Zhou Suhong, 2018). However, it is similar to this dissertation since both of them talk about gender differences and fraud cases.

Similarities and differences in gender differences: Previous research found that there is a significant difference comparing female and male victims, this might be related to people's thoughts. As a reason, nowadays people's ways of thinking have made a big progress, and the government is looking for new ways of avoiding more fraud cases happening. The victim became smarter and knew the tricks. This might be why there appeared differences comparing this dissertation to the previous one.

6. Evaluation

6.1 Highlight

This research is about how gender differences impact fraud cases, the investigation method of collecting cases is adopted, and the data from 20 cases are analyzed. It sorted out the connection between various aspects of the case and the gender of the scammer. Through Chi-square analysis ANOVA and other statistical methods, the research rigorously analyzed the relationship between gender and

fraud means and fraud amount, to ensure scientific and rigorous results. The use of this method makes the research not limited to descriptive analysis research rigorously analyzed the relationship between gender and fraud means and fraud amount using statistical methods such as Chi-square analysis, ANOVA, and others. By using these methods, the research went beyond simple descriptive analysis to provide quantitative results, ensuring scientific rigor. The research rigorously analyzed the relationship between gender and fraud means and fraud amount using statistical methods such as Chi-square analysis, ANOVA, and others. By using these methods, the research went beyond simple descriptive analysis to provide quantitative results, ensuring scientific rigor. But provides quantitative results. The four aspects analyzed in this dissertation are the amount of money that fraud, the gender of the fraudster, the gender of the victim and the method of fraud. Although there is no significant difference between male and female fraudsters, the average amount of fraud of males is significantly higher than that of female fraudsters, which provides a valuable database for subsequent research on the relationship between gender and fraud amount, so and the other three aspects that had mention in the dissertation.

6.2 Limitation

Limitations of this study include the small sample size of only 20 cases, which may not be enough to reveal potential gender differences. The limited classification of fraud means does not cover all complex types, and the methods of fraud might contain many details that probably impact the cases. Also, ignoring age, education level, economic status, and other important variables that may affect fraud behavior, and would affect the analysis. The extreme value of the fraud amount may affect the analysis results when doing the ANOVA analysis. The limitations of this study include a small sample size of only 20 cases, which may not be sufficient to reveal potential gender differences. Additionally, the limited classification of fraud means it does not cover all complex types, and the methods of fraud might contain many details that could significantly impact the cases. Age, education level, economic status, and other important variables that may affect fraud behavior were not considered in the analysis. This oversight could affect the analysis. Furthermore, the extreme value of the fraud amount may also affect the results of the analysis when conducting ANOVA. As well as the limitations of the time factor, scams evolve, especially in the context of a rapidly changing technological and social environment (such as the popularity of the Internet and digital means of payment). The results of this study may only

reflect current trends and cannot predict future changes in fraud patterns.

6.3 Future improvement

First of all, the number of research samples should be increased to improve the accuracy and reliability of statistical analysis and ensure that potential gender differences and other influencing factors can be detected. At the same time, it is not limited to the case studies in China, and the cultural and geographical scope of the research can be combined with foreign cases to compare the relationship between gender and fraud under different social and cultural backgrounds. At the same time, from the content of the research, more categories of fraud means are introduced, especially the emerging types of Internet fraud, identity theft, etc., to more comprehensively reflect the diversity and complexity of fraud behaviour. In addition to gender, future research should include age, education level, economic status, psychological characteristics, occupational background, and other important variables that may affect fraud behaviour, to deeply explore the interaction between all factors. In terms of research analysis methods, when the analysis of variance is carried out, the extreme value of the amount of fraud can be a more in-depth analysis, and statistical methods such as the median and quartile can be used to reduce the impact of extreme cases on the results and more accurately reflect the distribution of the amount of fraud. Finally, as mentioned in the limitation, with the continuous evolution of fraud methods and technologies, future research can conduct longitudinal research to track the long-term change trend of fraud behaviours and patterns, explore the impact of emerging technologies on fraud behaviours, and improve the value of the paper.

7. Conclusion

This study starts with question is how gender differences impact in fraud cases. By summarizes the secondary literature, and talks about the characteristics of the fraudster and the definition of fraud. The dissertation then collect actual fraud cases, using the Chi-square test and analysis of ANOVA. The results showed that the differences between men and women in fraud cases were not significant, reflecting the diminishing influence of gender roles on fraud in modern society. While past studies may have shown significant gender differences in fraud behaviour, this study reveals a trend toward blurring gender differences in the type and scale of fraud. Although this study has some limitations such as a small sample size and lim-

ited classification of fraud methods, the value of this study lies in that it provides an important reference direction for future research and could be a foundation of future study since this dissertation there appears a difference between the female fraudster and male fraudster, comparing to the amount of the money that fraud. To further explore the relationship between gender and fraud behaviour, future studies should expand the sample size, enrich the selection of variables, and explore more potential factors affecting fraud behavior.

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